

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (original) A method of voice communication concerning a local entity wherein:
 - (a) the local entity has an associated voice service hosted on a separate server connected to a communications infrastructure;
 - (b) with a user near the local entity, contact data relating to the user is transferred to a receiving device that is located at or near the local entity and is connected to the communications infrastructure;
 - (c) the contact data received by the receiving device is used to establish communication through the communications infrastructure between the voice service and equipment carried by the user that is in wireless connection with the communications infrastructure;
 - (d) the user interacts with the voice service with the latter acting as voice proxy for the local entity.
2. (original) A method according to claim 1, wherein the contact data is a data connection address for the user's equipment.
3. (original) A method according to claim 1, wherein the contact data is a telephone number of telephone functionality incorporated into the user's equipment.

4. (original) A method according to claim 1, wherein the contact data is user-specific data for translation by an element of the communications infrastructure into an access number or address of the user's equipment.

5. (currently amended) A method according to claim 1, wherein in ~~step~~-(d) the user and voice service interact through spoken dialog with both voice input by the user and voice output by the service.

6. (original) A method according to claim 5, wherein in said dialog the entity is represented in first person terms through the voice service.

7. (currently amended) A method according to claim 1, wherein ~~step~~ (d) involves voice input by the user and voice output by the service with voice input and voice output being effected by sound input and output devices forming part of the user's equipment.

8. (currently amended) A method according to claim 1, wherein ~~step~~-(d) involves voice input by the user and voice output by the service, voice output being effected using a sound output device forming part of the user's equipment, and voice input being through at least one local sound input device that is associated with the locality of the entity rather than with the user and is connected with the voice service through the communications infrastructure independently of the user's equipment.

9. (currently amended) A method according to claim 1, wherein ~~step~~(d) involves voice input by the user and voice output by the service, voice input being effected using a sound input device forming part of the user's equipment, and voice output being through at least one local sound output device that is associated with the locality of the entity rather than with the user and is connected with the voice service through a communications infrastructure independently of the user's equipment.

10. (currently amended) A method according to claim 1 or claim 5, wherein sound output is through multiple sound output devices spaced from said local entity and controlled so that the sound appears to the user to emanate from the location of said local entity independently of the user's position and head orientation relative to the entity~~be originating from said local entity.~~

11. (currently amended) A method according to claim 10, wherein said multiple sound output devices are headphones worn by the user, ~~the location of the voice service sound output in the audio field generated by the~~ excitation of the headphones being controlled to take account of the relative positions of the user and entity and rotations of the user's head.

12. (currently amended) A method according to claim 10, wherein said multiple sound output devices are loudspeakers associated with the locality of the entity rather than with the user and connected with the voice service through the communications infrastructure independently of the user's equipment, ~~the sound output from~~ excitation of the loudspeakers being controlled in dependence on the relative positions of the user and the entity.

13. (original) A method according to claim 1, wherein the voice service is effected by the serving of voice pages in the form of text with embedded voice markup tags to a voice browser, the voice browser interpreting these pages and carrying out speech recognition of user voice input, text to speech conversion to generate voice output, and dialog management; the voice browser being disposed between a voice page server and the user.

14. (currently amended) A method according to claim 13, wherein the user-related contact data serves to identify the user and is passed in ~~step~~(c) directly or indirectly to the voice browser which uses the contact data to look up an access number or address for the user's equipment.

15. (currently amended) A method according to claim 1, wherein the user equipment includes a mobile phone, ~~step~~(c) involving placing the voice service and mobile phone in communication.

16. (currently amended) A method according to claim 1, wherein:

- the voice service is effected by the serving of voice pages in the form of text with embedded voice markup tags to a voice browser, the voice browser interpreting these pages and carrying out speech recognition of user voice input, text to speech conversion to generate voice output, and dialog management; the voice browser being disposed between a voice page server and the user; and

- the user equipment includes a mobile phone, ~~step~~(c) involving placing the voice service and mobile phone in communication.

17. (currently amended) A method according to claim 16, wherein the voice browser is not part of the user's equipment and in ~~step~~-(c) the contact data, in the form of information for contacting the user's equipment, is passed directly to the voice browser together with a URL of the voice service, the voice browser contacting the user on the mobile phone using a voice circuit or data connection that is then used in ~~step~~-(d) for voice input and/or output between the user and voice browser.

18. (currently amended) A method according to claim 16, wherein the voice browser is not part of the user's equipment and the contact data comprises user-specific information which the voice browser can use to derive information for contacting the user's equipment, ~~step~~-(c) involving sending the user-specific information to the voice browser together with a URL of the voice service, the voice browser contacting the user on the mobile phone using a voice circuit or data connection that is then used in ~~step~~-(d) for voice input and/or output between the user and voice browser.

19. (currently amended) A method according to claim 16, wherein the voice browser is not part of the user's equipment and in ~~step~~-(c) the user-related contact data is passed to the voice page server which is then responsible for passing the contact data to the voice browser, the voice browser using this contact data to contact the user on the mobile phone using a voice circuit or data connection that is then used in ~~step~~-(d) for voice input and/or output between the user and voice browser.

20. (currently amended) A method according to claim 16, wherein the voice browser is part of the user's equipment and in ~~step~~ (c) the user-related contact data is passed to the voice page server which then connects with the user equipment via a data-capable bearer service of the communications infrastructure, the data-capable bearer service being subsequently used in ~~step~~ (d) for passing text based input and/or output between the voice browser and voice page server.

21. (original) A method according to claim 1, wherein the wireless network is a proprietary-space local network hosting the voice service, the local entity being located in the proprietary-space concerned.

22. (currently amended) A method according to claim 21, wherein the user equipment includes a wireless headset which in ~~step~~ (d) is used for exchanging voice input and output with the voice service.

23. (currently amended) A method according to claim 1, wherein in ~~step~~ (b) the identity of the user is sent to the voice service and used by the latter to look up user profile data which is then used to customise the voice service to the user.

24. (canceled)

25. (canceled)

26. (canceled)

27. (currently amended) A method according to claim 1, wherein the receiving device passes to the voice service, along with said contact data,~~includes~~ parameter values relating to the state of said local entity,~~in said contact data~~the voice service adapting its voice ~~where they are used in conditioning the output of the voice service~~in dependence on said parameter values.

28. (currently amended) A method according to claim 1, wherein the local entity has associated controllable functionality that is controlled by control data passed to it from the voice service ~~via the communications infrastructure to said functionality~~whereby to operate in coordination with said voice output.

29. (currently amended) A method according to claim 28, wherein said controllable functionality comprises a mouth representation device associated with the local entity and arranged to present a mouth representation that is movable in dependence on~~the local entity has an associated mouth-like feature movable by said functionality~~ the control data from the voice service whereby to operate ~~being used to cause operation of the mouth-like feature~~ in synchronism with voice output from the voice service.

30. (currently amended) A method according to claim 29, wherein the mouth representation device ~~mouth-like feature~~ is incorporated into the receiving device.

31. (currently amended) A method according to claim 1, wherein the voice output provided from the service ~~provided to a user~~ is

dependent on the orientation of the local entity as perceived from the user's current location~~user's position relative to the entity.~~

32. (currently amended) A method according to claim 1, wherein the voice output provided from the service ~~provided to a user~~ is dependent on the user's orientation relative to the entity.

33. (currently amended) A method according to claim 1, wherein the voice output provided from the service ~~provided to a user~~ is dependent on the user's line of approach or departure relative to the entity.

34. (currently amended) A method according to claim 33, wherein multiple receiving devices are associated with the entity, the voice service adapting its voice output in respect of said local entity in dependence on the ~~contact data of the receiving device first or most-recently picking up the user-related contact data determining the voice service being provided to the user in respect of that entity.~~

35. (currently amended) A system for enabling verbal communication on behalf of a local entity with a nearby user, the system comprising:

user equipment, intended to be carried by a user, comprising a wireless communication subsystem, an audio output means~~arrangement~~, and a contact-data transfer arrangement~~means~~ for transmitting contact data identifying a voice service associated with the entity but separately hosted;

a communications infrastructure comprising at least a wireless network with which the wireless communication subsystem

of the user equipment can communicate;

a contact-data receiving device located at or near the local entity and operative to receive contact data from the contact-data transfer arrangement~~means~~ of the user equipment when the user is close to the local entity, the receiving device being connected to the communications infrastructure independently of the user equipment and being further operative to pass received contact data to the voice service associated with the entity; and

a voice service arrangement for providing said voice service, the voice service arrangement being connected to said communications infrastructure to receive said contact data from the contact-data receiving device and to thereupon to act as voice proxy for the local entity by providing voice output signals over the communications infrastructure to the audio output arrangement~~means~~.

36. (original) A system according to claim 35, wherein the contact data is a data connection address for the user's equipment.

37. (original) A system according to claim 35, wherein the contact data is a telephone number of telephone functionality incorporated into the user's equipment.

38. (original) A system according to claim 35, wherein the contact data is user-specific data for translation by an element of the communications infrastructure into an access number or address of the user's equipment.

39. (currently amended) A system according to claim 35, further comprising an audio input ~~means~~ arrangement forming part of the user's equipment, the audio input and output arrangements~~means~~ together enabling a user to interact with the voice service through spoken dialog with voice input by the user through the audio input ~~means~~ arrangement and voice output to the user through the audio output ~~means~~ arrangement.

40. (original) A system according to claim 39, wherein in said dialog the entity is represented in first person terms through the voice service.

41. (currently amended) A system according to claim 35, wherein said audio output arrangement comprises multiple audio output devices in the form of ~~means~~ are headphones worn by the user, and a controller for controlling excitation of the headphones such as to produce the location of the voice service a sound output that appears to the user to emanate from the location of said local entity independently of the user's position and head orientation relative to the entity ~~in the audio field generated by the headphones being controlled to take account of the relative positions of the user and entity and rotations of the user's head. such that the sound output appears to be originating from said local entity.~~

42. (original) A system according to claim 39, wherein the voice service arrangement comprises:

- a voice page server for serving voice pages in the form of text with embedded voice markup tags; and
- a voice browser comprising:

- a speech recognizer for carrying out speech recognition of user voice input received as voice signals;
- a dialog manager for effecting dialog control on the basis of output from the speech recognizer and pages served by the voice page server; and
- a text-to-speech converter operative to convert voice pages into voice output signals under the control of the dialog manager.

43. (original) A system according to claim 42, wherein the user-related contact data serves to identify the user, the receiving device being arranged to pass this contact data directly or indirectly over the communications infrastructure to the voice browser the latter being operative to use the contact data to look up an access number or address for the user's equipment.

44. (original) A system according to claim 42, wherein the user equipment comprises a mobile phone providing the said wireless communication subsystem and said audio input and output devices.

45. (original) A system according to claim 44, wherein the voice browser is not part of the user's equipment and the contact data comprises information for contacting the user's equipment, the receiving device being operative to pass the contact data to the voice browser together with a URL of the voice service, the voice browser being responsive to receiving the contact data to contact the mobile phone using a voice

circuit or data connection that is then used for voice input and output between the user and voice browser.

46. (original) A system according to claim 44, wherein the voice browser is not part of the user's equipment and the contact data comprises user-specific information, the receiving device being operative to pass the contact data to the voice browser together with a URL of the voice service, the voice browser being responsive to receiving the contact data to use it to use to derive information for contacting the user's equipment, the voice browser being operative to use this derived information to contact the mobile phone using a voice circuit or data connection that is then used for voice input and output between the user and voice browser.

47. (original) A system according to claim 44, wherein the voice browser is not part of the user's equipment, the receiving device being operative to pass the user-related contact data to the voice page server, the voice page server being responsive to receipt of the contact data to pass it to the voice browser and the browser being operative to use this contact data to contact the mobile phone using a voice circuit or data connection that is then used for voice input and output between the user and voice browser.

48. (original) A system according to claim 44, wherein the voice browser is part of the user's equipment, the receiving device being arranged to pass the user-related contact data to the voice page server, the voice page server being operative on receipt of the contact data to connect with the user equipment via a data-capable bearer service of the communications

infrastructure, the user equipment and voice page server being arranged to use the data-capable bearer service for passing text based input and/or output between the voice browser and voice page server.

49. (original) A system according to claim 35, wherein the wireless network is a proprietary-space local network hosting the voice service arrangement, the local entity being located in the proprietary-space concerned.

50. (original) A system according to claim 39, wherein the wireless network is a proprietary-space local network hosting the voice service arrangement, the local entity being located in the proprietary-space concerned.

51. (currently amended) A system according to claim 50, wherein said audio output ~~means~~sarrangement comprises headphones worn by the user, and a controller for controlling excitation of the headphones in dependence on the location of the voice service sound output in the audio field generated by the headphones being controlled to take account of the relative positions of the user and entity and rotations of the user's head such that the sound output appears to the user to emanate from the location of said local entity independently of the user's position and head orientation relative to the entity~~be originating from said local entity.~~

52. (canceled)

53. (canceled)

54. (canceled)

55. (currently amended) A system according to claim 235, wherein the receiving device is operative to pass to the voice service arrangement, along with said contact data,~~include~~ parameter values relating to the state of said local entity~~in said contact data,~~ the voice service arrangement being operative to use these parameter values to ~~condition~~ adapt the output of the voice service.

56. (currently amended) A system according to claim 35, ~~wherein further comprising controllable functionality associated with the local entity has associated functionality~~ and arranged to be controlled by control data passed to it from the voice service whereby to operate in coordination with said voice output~~via the communications infrastructure.~~

57. (currently amended) A system according to claim 56, wherein said controllable functionality comprises a mouth representation device associated with the local entity and arranged to present a mouth representation that is~~the local entity has an associated mouth-like feature movable by said functionality in dependence on the control data from the voice service whereby to cause operation of the mouth-like feature in synchronism with voice output from the voice service.~~

58. (currently amended) A system according to claim 35, further comprising an arrangement for determining the orientation of the local entity as perceived from the user's current location,~~means for sensing the position of the user relative to the entity, and means for passing corresponding position data to the~~

~~voice service,~~ the voice service being operative to ~~adaptecondition~~ its voice output in dependence on the determined orientation of the local entity~~user's sensed position.~~

59. (currently amended) A system according to claim 35, further comprising an arrangement for determining ~~means for sensing the~~ orientation of the user relative to the entity, ~~and means for passing corresponding orientation data to the voice service,~~ the voice service being operative to ~~adaptecondition~~ its voice output in dependence on the ~~user's sensed~~ determined orientation.

60. (currently amended) A system according to claim 35, further comprising an arrangement for determining ~~means for sensing the~~ line of approach of the user relative to the entity, ~~and means for passing corresponding line-of-approach data to the voice service,~~ the voice service being operative to ~~adaptecondition~~ its voice output in dependence on the user's determined line of approach.

61. (currently amended) A system according to claim 35, wherein multiple receiving devices are associated with the entity, the voice service arrangement being arranged to adapt the voice output of the voice service delivered in respect of said local entity in dependence on the ~~contact data of the~~ receiving device first or most recently receiving contact data from the user ~~equipped by the voice service arrangement determining the voice service to be provided to the user in respect of that~~ entity.